



**BUILDING AMERICA®**

May 12, 2016

Members of the Planning Commission  
Attention: Ramona Hedges, Planning Commission Secretary  
San Luis Obispo County  
Department of Planning and Building  
976 Osos Street, Room 200  
San Luis Obispo, CA 93408-2040

**Re: Phillips 66 Company Rail Spur Extension Project**

Dear Commissioners:

In the course of your consideration of Phillips 66 Company's proposed Rail Spur Extension Project, speakers at the public hearings have made a number of statements regarding the condition of bridges, rails and other equipment owned and operated by Union Pacific Railroad Company ("UP"). Safety is UP's top priority. UP adheres to the strictest safety practices that meet and in many ways exceed the federal safety regulations. We continually invest in equipment, maintenance, testing, monitoring and training to ensure that we operate the safest railroad possible. Accordingly, we expect that you would like to hear the facts regarding items mentioned in the public hearings.

**Bridges**

UP owns approximately 19,000 bridges nationwide, of which approximately 2,750 are located in California. We recognize and take very seriously the responsibility of ensuring that our bridges are in sound condition. We have a team of nearly 600 bridge maintenance and inspection professionals led by a group of licensed civil engineers who supervise bridge-related work and processes. Altogether, we conduct more than 38,000 bridge inspections annually using 29 specially trained two-person bridge inspection teams. Inspectors examine each bridge component, including superstructure, substructure, track, decking, and bearing systems. Inspectors look for corrosion or cracks that indicate a need for maintenance or replacement of components. "Snoopers," depicted below, are equipped with articulated basket cranes that allow inspectors to view components both above and below the bridge deck. Underwater inspections are also conducted.

Federal regulations include a comprehensive set of requirements concerning railroad bridges (See 49 CFR Part 237, Bridge Safety Standards). To reduce the risk of human casualties, environmental damage, and disruption to the nation's railroad transportation system, each track owner is required to adopt a bridge safety management program meeting specified federal criteria. The regulations also specify the qualifications required for bridge engineers, inspectors, and bridge supervisors.

Federal regulations require bridges to be inspected at least once per calendar year, with inspections no more than 540 days apart. Inspections must be documented and records retained for presentation to the Federal Railroad Administration. UP's bridge inspection program exceeds federal requirements. Ninety-five percent of our bridges are inspected at least twice per year. Bridges in our busiest corridors receive quarterly inspections. Additional inspections are made following severe weather, earthquakes and wildfire.

One commenter at the public hearings on the Phillips 66 Project stated that the main line route to the Santa Maria Refinery passes over the Stenner Creek Bridge that was originally constructed in 1894. The original construction date is not particularly relevant. In fact, older railroad bridges were designed and constructed when freight trains were powered by steam locomotives, which were up to three times heavier than modern freight locomotives. Therefore, an older bridge in good condition is quite capable of carrying the weight of today's trains. In any event, the important question is the condition of the bridge today. As with all our bridges, the Stenner Creek Bridge is inspected regularly. The most recent UP inspection of the Stenner Creek Bridge occurred just over a month ago, on March 27, 2016. That inspection concluded that the bridge was safe for train traffic.

Another person stated that rust was observed on the Benicia-Martinez Bridge. Rust is normal. It forms on the surface of bridges when steel is exposed to oxygen and water over long periods of time. The presence of rust does not mean that the bridge lacks integrity. During regular bridge inspections, all aspects of the bridge are carefully examined and documented, including the condition of the metal structure. The most recent UP inspection of the Benicia-Martinez Bridge occurred on March 3, 2016. That inspection concluded that the bridge was safe for train traffic.

### **Track Design and Condition**

Federal regulations specify the standards we must meet in designing, inspecting and maintaining railroad track (See 49 CFR Part 213, Track Safety Standards). Design standards include detailed specifications regarding the roadbed, track geometry (including the interplay between curves and operating speeds), and track structure (including ballast, crossties, rails and switches). The regulations also specify the qualifications of individuals inspecting the condition of the track systems, and establish a mandatory inspection frequency. Mainline track must be inspected weekly, semi-weekly or monthly, depending upon its class and usage.

Union Pacific employees participate in rigorous safety training programs and are trained to identify and prevent potential derailments. Keeping trains on the tracks is a full time job for thousands of Union Pacific track maintenance employees, track inspectors and civil engineering professionals. In addition to the human expertise devoted to track inspection and renewal, we regularly inspect our track using a number of leading technologies:

- Lasers and ultrasound, which identify rail imperfections.
- Acoustic wheel vibration tracking, which forecasts potential failures before they happen.
- Trackside sensors, which perform a real-time analysis of every rail car moving on our system, equaling 20 million car evaluations per day.
- Geometry cars, which measure track alignment and other metrics such as railroad clearances on railroad tunnels and bridges.
- Bridge inspections, which are performed regularly on all bridges on the Union Pacific network to assure structural integrity.
- Additional inspections, which are performed during extreme weather and after earthquakes.

In addition to company inspections, the California Public Utilities Commission rail group, acting under state and federal law, also regularly inspects our track systems.

### **Positive Train Control**

Positive Train Control ("PTC") is a collision avoidance technology intended to override locomotive controls and stop a train before an accident can occur. For example, PTC technology is designed to automatically control train speeds and movements should a train operator fail to

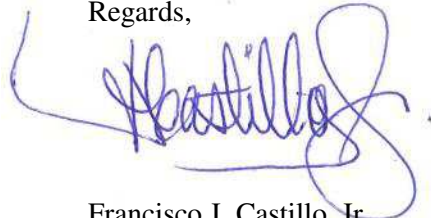
take appropriate action for the conditions at hand. The objective of PTC is to avoid train-to-train collisions; derailments resulting from excessive speed; train incursion into an established work zone; and train movement through a switch in the wrong position. The Rail Safety Improvement Act of 2008 requires Class I railroads such as UP to install PTC on main line rail routes used to carry certain hazardous materials, as well as any main lines over which regularly scheduled passenger intercity or commuter operations are conducted (See 49 U.S.C. 20157). This includes the rail routes within California that we would take to deliver unit trains to the Phillips 66 Santa Maria Refinery.

UP has dedicated tremendous resources to developing and installing this complex technology. We expanded our work force to address this challenge, and have had about 1,000 people working on the effort. The Final EIR for the Phillips 66 Project states PTC has been installed on the main line routes between Roseville and the Santa Maria Refinery, and Colton and the Santa Maria Refinery (FEIR p. 4.7-47). This is correct. In addition, through January 1, 2016, Union Pacific:

- Invested \$2 billion in PTC. Union Pacific's current estimate for PTC's total cost is about \$2.9 billion.
- Installed 67 percent, or 14,166 miles, of total track miles with PTC hardware and software.
- Partially installed PTC hardware on about 81 percent of its 5,656 locomotives earmarked for the technology.
- Fully equipped 1022 locomotives with PTC hardware for revenue service demonstration (a test of the PTC system in a defined rail corridor).
- Installed 72 percent of the wayside antennas needed to support PTC along the company's right of way.

At UP we are committed to running the safest railroad possible. If you have questions regarding any other aspect of our safety program and performance, please do not hesitate to contact me.

Regards,

A handwritten signature in blue ink, appearing to read "Castillo", with a large, stylized flourish extending from the end of the signature.

Francisco J. Castillo, Jr.  
Director - Public Affairs